

# EVE Reference Guide Questionnaire (CHINA)

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# Pre-introduction

## ➤ Standards and Regulations

- China has both national standards and industry standards

i.e. National Standard as **GB**, Automotive Industry Standard as **QC**,  
and Energy Industry Standard as **NB**.

- Mainly responsible by AQSIQ, MIIT, and NEA(NDRC)

## ➤ Policies and Measures

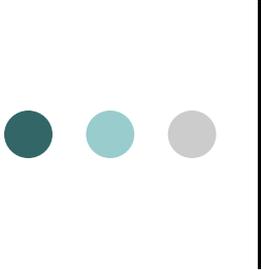
- From both the nation and the local governments



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# Q1: Electrified Vehicle Range

- Standards on BEV have been established:
  - GB/T 28382-2012 Pure electric passenger cars -Specifications
  - GB/T 18386-2005 Electric vehicles -Energy consumption and range -Test procedures
  
- Standards on PHEV are under development.



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## Q2: Energy Consumption/Efficiency

- Standards on BEV/PHEV/HEV have been established, and some are under revision.
  - GB/T 18386-2005 Electric vehicles -Energy consumption and range -Test procedures
  - GB/T 19753-2005 Test methods for energy consumption of light-duty hybrid electric vehicle (Under Revision)
  - GB/T 19754-2005 Test methods for energy consumption of heavy-duty hybrid electric vehicle (Under Revision)



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# Q3: Electrified Vehicle Driver-user Information

- China has the individual standard on symbols of EV, and there are also some requirements in the safety standards.
  - GB/T 4094.2-2005 Electric vehicle-symbols for controls, indicators and tell-tales
  - GB/T 18384.2-2001 Electric vehicles-safety specification Part 2: Functional safety means and protection against failures
  - GB/T 19751-2005 Hybrid electric vehicles safety specification



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# Q4: Electrified Vehicle Recycling and Re-use (excluding the battery)

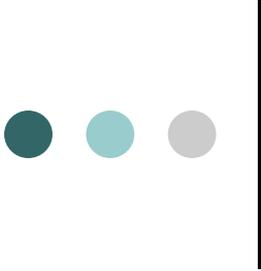
- China don't have the standards for Evs, only some for ICEs
  - GB/T 19515-2004 Road vehicles-Recyclability and recoverability calculation method
  - GB 22128-2008 Technical specification for end-of-life Vehicles recycling and dismantling enterprise



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## Q5: Vehicle Labelling

- There are only labels on ICE, and China is researching on the labels of EVs.
  - GB 22757-2008 Fuel consumption label for light vehicle
- China also published the governmental provision on the requirements of sticking the labels.



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## Q6: Battery Performance

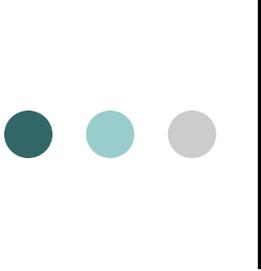
- Different types of vehicle have different requirement about power input, driving range and charging time of EV. i.e. different types of vehicle can charge from 30min to 5h through constant power mode.
  - QC/T741-2006 Ultracapacitors for vehicles
  - QC/T743-2006 Lithium-ion batteries for electric vehicles
  - QC/T744-2006 Nickel-metal hydride batteries for electric vehicles
  - GB/T 18385-2005 Electric vehicles-Power performance-Test method
  - GB/T 18386-2005 Electric vehicles-Energy consumption and range-Test procedure
  - GB/T 28382-2012 Pure electric passenger cars – Specifications
- Standards on Battery Pack and BMS are under development.



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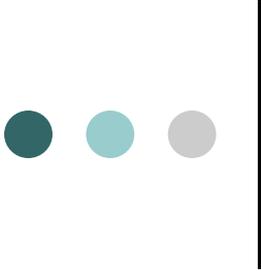
## Q7: Battery Durability

- The requirements in regards to working life, reliability and weather resistance of power system.
  - QC/T 743-2006 Lithium-ion batteries for electric vehicles
- Some requirements in the standards on the whole vehicles



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## Q8: Battery Recycling

- There are no standards at this moment, but it's necessary.
- Standards on Battery recycling are under development.

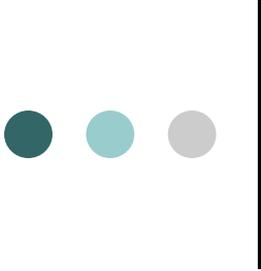


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## Q9: Battery Re-use (post-mobility)

- There are no standards at this moment, but it's necessary.
- Standards on Battery re-use are under development.



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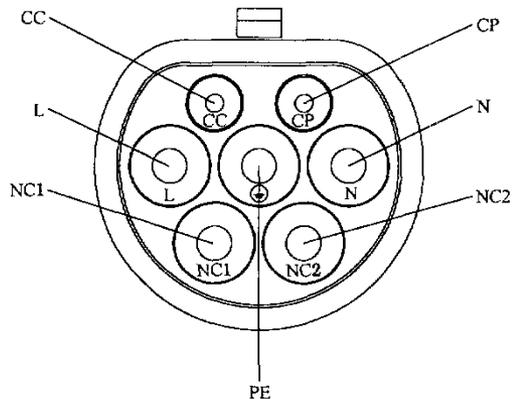
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# Q10: On-board Charging System

## ➤ Related Standards

- GB/T 20234.1-2011 Connection set of conductive charging for electric vehicles-Part 1: General Requirements
- GB/T 20234.2 2011 Connection set of conductive charging for electric vehicles-Part 2: AC Charging coupler
- QC/T 895 2011 On-board conductive charger for electric vehicle



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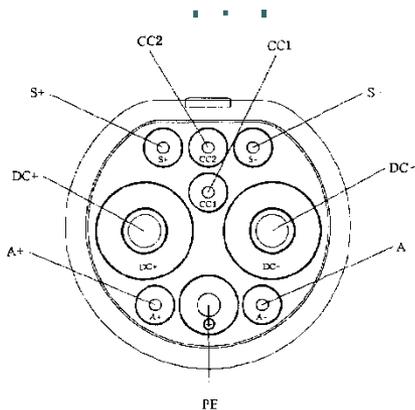
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# Q11: Off-board Charging Standard Related to the Vehicle

## ➤ Related Standards

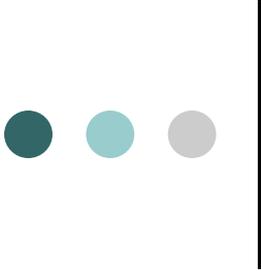
- GB/T 20234.3-2011 Connection set of conductive charging for electric vehicles-Part 3: DC charging coupler
- NB/T 33001-2010 Specification for electric vehicle off-board conductive charger
- GB/T 27930-2011 Communication protocols between off-board conductive charger and battery management system for electric



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## Q12: Wireless Charging

- Related technologies are under research and experiment.



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# Q13: Vehicle as Electricity Supply

- China has no national or industry standards, only some enterprise-level standards:
  - Q/GDW 397-2009 Off-board bi-directional charger for electric vehicles: General technical requirements
  - Q/GDW 398-2009 Off-board bi-directional charger for electric vehicles: Specification for electric interfaces
  - Q/GDW 399-2009 AC power supply device for electric vehicles: Specification for electrical interfaces



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# Q14. Regulatory Incentives

- Energy saving and new energy vehicle industry development plan (2012-2020)
  - This plan requires some relevant places to make a distinction for the new energy vehicles when they take measures such as the limited numbers of implementation , license plate quota auction and car quota indicator.
- Passenger car average fuel consumption accounting approach, published in last month.
  - for EV,FCV and PHEV which driving range up to 50 km or above in EV mode integrated operating condition, the actual value of the fuel consumption of the integrated operating condition is regarded as zero, and five times of the result should be added to the accounting cardinality;
  - for the vehicles which actual value of the fuel consumption of the integrated operating condition less than 2.8 L/ 100 km, excluding EV and FCV, three times of the result should be added to the accounting cardinality.
- Related Standards
  - GB 27999-2011 Fuel consumption evaluation methods and targets for passenger car



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# Q15: Financial Incentives

- Energy-saving and new energy vehicle demonstration and extension of financial assistance fund management Interim Measures
  - Buyers of EV will receive up to RMB60,000, and buyers of HEV as much as RMB50,000.
- Private purchase of new energy vehicle pilot financial assistance fund management Interim Measures
  - For public service vehicles, EV will receive up to RMB60,000, HEV as much as RMB50,000, and FCV as much as RMB250,000.
- Some subsidy from the local governments for the vehicles and infrastructure
- Law of the People's Republic of China on Vehicle and Vessel Tax
  - Reduction or exemption of vehicle and vessel tax may be granted to those vehicles and vessels that conserve energy or use new energy.



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## Q16. Consumer Awareness

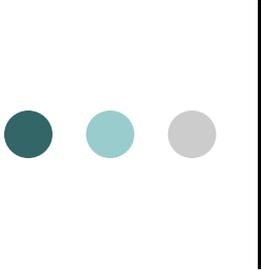
- There are some public posters in the avenues of auto show and other related activities.
- There are some symbols on Electrified vehicles for the consumers to recognize them.



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# Q17: Government Purchasing

- There should be some requirements from the nation and local governments, while China has no official policies yet.



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